



Increment 23/24 CRR:
Radiation

Medical Operations

Presenter

SD2 / William Misek

Date

02/04/2010

Radiation Critical Readiness Review

Increment 23/24
04 February 2010

William Misek



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Hardware Status

Active Hardware

TEPC	Nominal. Currently deployed in JPM
EV-CPDS	EV-CPDS1 (Fwd): Non-operational EV-CPDS2/3 (Zen/Aft): Operational
IV-CPDS	No longer on-board.
ALTEA*	<i>Nominal.</i>

*ASI/POIC hardware currently operating per SRAG request

Passive Hardware

HRDs	Last resupplied: August 2009 (17A)
RAMs	Last resupplied: July 2009 (2J/A) 25 RAMs currently deployed in 7 modules



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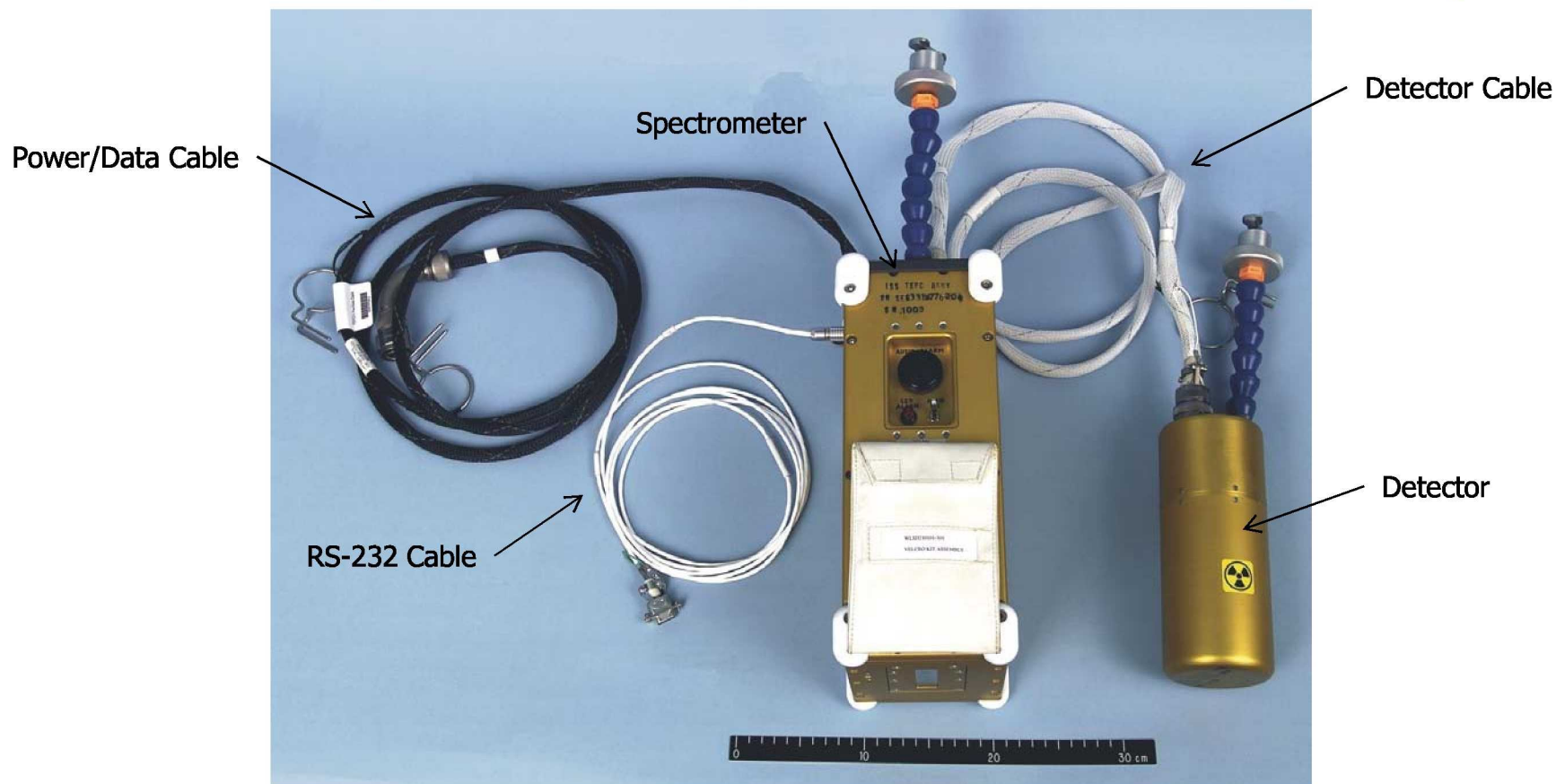
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Tissue Equivalent Proportional Counter (TEPC)





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• **TEPC Activities Planned for Increment 23/24**

- TEPC Relocate (20 minutes of crew time)
 - í TEPC moved to new location in ISS approximately every 4 weeks
 - í After 20A, Node 3 will be available as a possible TEPC survey location (UOP 2 on NOD3A6 noted as possible TEPC plug-in location)
- Nominal TEPC Data Dumps and File Erase Activities (ground activity)
 - í All data files from TEPC dumped to Payload MDM once a week
 - í Data files erased from TEPC internal memory every other week

• **Additional Note**

- Backup TEPC (S/N 1003) is currently undergoing ground testing and will be refurbished and recertified in time for either ULF6 (E24) or ULF5 (E25). It should require an activation and checkout during docked ops.





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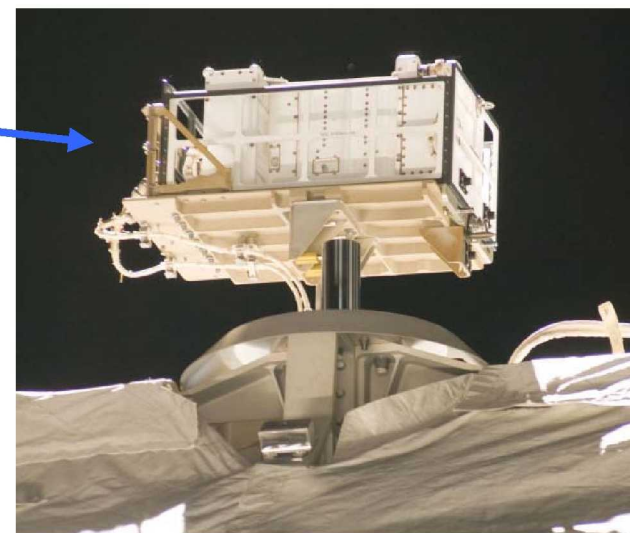
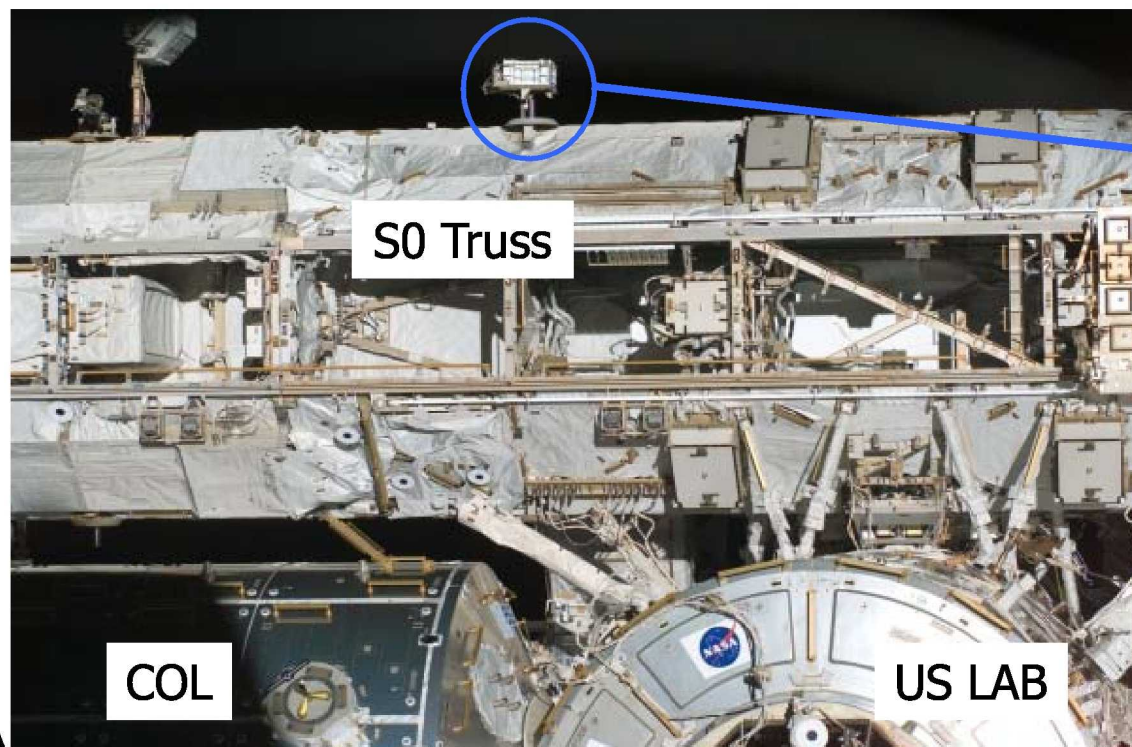
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Extra-Vehicular Charged Particle Directional Spectrometer (EV-CPDS)





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- **EV-CPDS Activities Planned for Increment 23/24**

- › Nominal EV-CPDS Data Dumps and File Erase Activities (ground activity)
 - í All data files from each CPDS dumped to Payload MDM once a week and erased from internal memory

- **Additional Note**

- █ Last EV-CPDS Directory Cleanup occurred on 6/4/2009
 - í An additional Directory Cleanup will likely be needed during Increment 23/24 (on average, a cleanup is needed about every 6 months)



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Radiation Area Monitors (RAMs)





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- **RAM Activities Planned for Increment 23/24**

- › A RAM swap will be needed in Increment 23/24. However, it is not yet known whether this will take place during shuttle docked ops or after a progress/soyuz docking.

- **Additional Note**

- RAMs currently deployed in the following modules:
 - í SM, NOD1, A/L, LAB, NOD2, COL, JPM



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- **SRAG Website Updates**

- › BMEs are required to update the SRAG website after all commanding
- › Remember, the SRAG website is SRAG's main source of information about the health of the radiation hardware
- › BME Response should include:
 - Number of files dumped/erased
 - Notification of any ignored commands
 - Reports of any "expected anomalies" such as Lockups
 - Any other anomalies (improper RTMC responses, spontaneous reboots, etc) should be reported in the BME Response in addition to an Anomaly Report
- › If you are unable to complete the required commanding and cannot close out the SRAG Instruction due to an anomaly, you should still write and save a BME Response (more than one BME Response can be saved to a SRAG Instruction)